

AMENDMENT UNDER 37 C.F.R. § 1.111  
Application No.: 10/807,009

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1.     *(Currently Amended)* A method of determining user interactions comprising the steps of:  
  
          determining speech information;  
  
          determining discourse functions and prosodic features in the speech information;  
  
          determining a predictive interaction model; and  
  
          determining an interaction turn based on the predictive interaction model and the  
determined discourse functions and prosodic features, wherein the discourse functions are  
determined based on a theory of discourse analysis, the theory of discourse analysis being at least  
one of: the Linguistic Discourse Model, the Unified Linguistic Discourse Model, Rhetorical  
Structures Theory, Discourse Structure Theory and Structured Discourse Representation Theory.
2.     *(Original)* The method of claim 1, in which the discourse functions are determined from  
automatically recognized speech information.
- 3.-4.   *(Cancelled)*
5.     *(Original)* The method of claim 1, further comprising the step of scheduling an

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interaction event based on the turn prediction.

6. (*Original*) The method of claim 1, in which the prosodic features include at least one of:  
a silence preceding a discourse functions; a silence following a discourse function; rate of  
speech; pitch frequency; changes in pitch frequency and volume.

7. (*Currently Amended*) A method of determining a predictive interaction model comprising  
the steps of:

determining a training corpus of turn annotated speech information;  
determining discourse functions and prosodic features associated with the turn  
information; and  
determining a predictive interaction model based on the discourse functions, the prosodic  
features and the turn information, wherein the discourse functions are determined based on a  
theory of discourse analysis, the theory of discourse analysis being at least one of: the Linguistic  
Discourse Model, the Unified Linguistic Discourse Model, Rhetorical Structures Theory,  
Discourse Structure Theory and Structured Discourse Representation Theory.

8. (*Currently Amended*) The method of claim 7, in which the predictive interaction model is  
determined based on at least one of machine learning, decision tree, Naive Nave Bayes, rules and  
statistics.

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9. *(Cancelled)*

10. *(Currently Amended)* A system for determining interactions comprising:

an input/output circuit for retrieving recognized speech and prosodic features;

a processor that determines speech information; and discourse functions and prosodic features in the speech information; determines a predictive interaction model; and determines an interaction turn based on the predictive interaction model and the discourse functions and prosodic features, wherein the discourse functions are determined based on a theory of discourse analysis, the theory of discourse analysis being at least one of: the Linguistic Discourse Model, the Unified Linguistic Discourse Model, Rhetorical Structures Theory, Discourse Structure Theory and Structured Discourse Representation Theory.

11. *(Original)* The system of claim 10, in which the discourse functions are determined from automatically recognized speech information.

12.-13. *(Cancelled)*

14. *(Original)* The system of claim 10, in which the processor also schedules an interaction event based on the turn prediction.

15. *(Original)* The system of claim 10, in which the prosodic features include at least one of:

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a silence preceding a discourse functions; a silence following a discourse function; rate of speech; pitch frequency; changes in pitch frequency and volume.

16. (*Currently Amended*) Computer readable storage medium comprising: computer readable program code embodied on the computer readable storage medium, the computer readable program code usable to program a computer to determine interactions comprising the steps of:

determining speech information;

determining discourse functions and prosodic features in the speech information;

determining a predictive interaction model; and

determining an interaction turn based on the predictive interaction model and the determined discourse functions and prosodic features, wherein the discourse functions are determined based on a theory of discourse analysis, the theory of discourse analysis being at least one of: the Linguistic Discourse Model, the Unified Linguistic Discourse Model, Rhetorical Structures Theory, Discourse Structure Theory and Structured Discourse Representation Theory.

17. (*Original*) The method of claim 1, in which the speech information is at least one of: verbal natural language information and non-verbal natural language information.

18. (*Original*) The method of claim 17, in which the non-verbal information is at least one of: sign language gestures, pen gestures, hand gestures, body gestures and facial gestures.

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19.     (*Original*) The method of claim 7, in which the speech information is at least one of:  
verbal information natural language and non-verbal natural language information.

20.     (*Original*) The method of claim 18, in which the prosodic features include at least one of:  
facial expressions, gesture velocity, and gesture force.